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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,832	02/13/2002	Timothy L. Kelliher	010402-01	6341
39368	7590	04/19/2005	EXAMINER	
SKYMOON RESEARCH & DEVELOPMENT			TSE, YOUNG TOI	
3045 PARK BLVD.				
PALO ALTO, CA 94306			ART UNIT	PAPER NUMBER
			2637	
DATE MAILED: 04/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/074,832

Applicant(s)

KELLIHER, TIMOTHY L.

Examiner

YOUNG T. TSE

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1,2 and 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-10 and 16-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: on page 6, line 12, the Applicant is requested to update the U.S. Application No. 09/951,351, now U.S. Patent No. 6,798,769 B1; on page 12, line 2, "in made" should be "is made".

Appropriate correction is required.

### ***Claim Objections***

2. Claims 4-6, 9-10, and 17-19 are objected to because of the following informalities:

In claim 4, lines 10-11, "setoff" and "OAMEOC" should be "set off" and "OAM/EOC", respectively. Wherein claims 5-6 depend upon claim 4.

In claim 9, lines 5 and 11, "interface between" and "of downstream" should be "interface coupled between" and "of N downstream", respectively. Wherein claims 10 and 17-18 depend upon claim 9.

In claim 19, lines 9-10, "a DSL Modem data, otherwise if connected to an OAM/EOC Modem, transferring synchronization data;" should be "one of the group of M DSL modem;", lines 11-12, "transferring synchronization data if the Customer Premise Equipment device is connected to an OAM/EOC Modem;" should be "(c) transferring synchronization data for the Customer Premise Equipment device if the Customer Premise Equipment device is connected to the OAM/EOC Modem;"; line 15, "a DSL

MODEM" should be "one of the group of M DSL modems", line 16, "a Time-Out" should be "the tome-out", and line 17, "(a)-(e)" and "(b)-(e)" should be "(a)-(d)" and "(b)-(d)", respectively.

Further, the Applicant is suggested not to begin with a capital word for "Customer Premise Equipment", "Time-Out or No-More-Data", "Public Switched Telephone Network", and "Modem".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9-10 and 16-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to explain that a first downstream data link of a plurality of downstream data links being coupled to a customer premise equipment device, wherein user traffic data is transferred over the first downstream data link between the customer premise equipment device and an upstream data link via one of the croup of M DSL modems and synchronization data is transferred over the first downstream data link

between the customer premise equipment device and one of the group of P OAM/EOC modems as recited in claim 9. Wherein claims 10 and 16-18 are depended upon claim 9.

The specification also fails to explain that a common customer premise equipment device is used to transfer both user traffic data to a DSL modem and synchronization data to an OAM/EOC modem as recited in claim 19.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3-10 and 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3 (lines 1 and 5), claim 5 (line 3), claim 9 (lines 1, 7, and 9), claim 10 (line 2), claim 16 (line 2), claim 17 (lines 2 and 4-5), claim 19 (lines 2 and 7), "M", "P", "OAM/EOC", "RTS/CTS", "N", "POTS", "ISDN", and "OCn" are undefined.

In claim 17, line 3, "the Public Switched Telephone Network" lacks antecedent basis.

Wherein claims 4, 6-8, and 18 are depended upon claims 3 and 9.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 3-4 and 6 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-2 and 4 of copending Application No. 10/159,496.

This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: the claimed subject matter of claims 3-4 and 6 of the instant application is broader than the claimed subject matter of claims 1-2 and 4 of copending Application No. 10/159,496, although the P OAM/EOC modems of the instant application are different of the P low bandwidth synchronization modems of the copending Application No. 10/159,496, the function for the modems are the same of transferring synchronization data between the modems and a set of P customer premise equipments. Although the conflicting claims 3 and 1 are not identical, they are not patentably distinct from each other because the broader claims of the instant application would have been obvious in view of the narrow issued claims of the copending Application No. 10/159,496 (see *In re Emert*, 124 F.3d 1458, 44USPQ2d 1149).

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 3 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Long et al..

Long et al. (U.S. Patent No. 6,804,267 B1) discloses an apparatus in Figure 1 for communication between a central office 8 and customer premise equipments. Wherein the central office 8 comprising ISDN line cards 14 and the customer premise equipments comprising ISDN modems 12.

Figure 6 discloses an alternative embodiment of Figure 1 which also comprising a central office 8 and customer premise equipments (not shown). Wherein the central office 8 comprising three ISDN line cards 14 and two TCM-DSL line cards 50, the

customer premise equipments may comprising three ISDN modems 12 and two TCM-DSL modems as shown in Figure 1. See column 7, line 53 to column 8, line 16.

Figure 7 shows a frequency spectrum for TCM-DSL.

Figure 8 show a diagram of framed TCM-DSL data for TCM.

Figure 9 shows a diagram of a TCM-DSL phone line highlighting frequency splatters.

Figure 10 shows a diagram of TCM-DSL line equipment at the central office.

Figure 11 shows a diagram of a TCM-DSL modem.

With respect to claim 3, the TCM-DSL line cards 50 correspond to the M DSL modems for transferring user traffic data or high data rate to the first set of M customer premise TCM-DSL line modems; the ISDN line cards 14 correspond to the P OAM/EOC modems for transferring synchronization data or low data rate to the first set of P customer premise ISDN line modems. Notice, since each modem in the central office and the customer premise equipments needs to be synchronized with each other prior the transmission of the communication, therefore, the modems 14 and 50 are capable of transferring both traffic data and synchronization data to the customer premise equipment modems.

With respect to claim 7, the data rate of the modems in the central office is variable and the data rate of the TCM-DSL modems 50 are much higher than the data rate of the ISDN line modems, thus, the synchronization data is also much less than the user traffic data.



With respect to claim 8, it is well known in the modem communication that transferring of data need to be stopped when there is a time out or no more data to be transmitted.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 4-5, 9-10 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al. in view of Farmwald.

Long discloses all the claimed subject matter as recited in claims 4 and 9 as mentioned in item 10 above, except Long does not show a switch for connecting the M TCM-DSL line modems to a second set of M TCM-DSL customer premise equipment modems, wherein at least some of the second set of M TCM-DSL customer premise equipment modems are members of the first set of P ISDN line customer premise equipment modems and for connecting the P ISDN line modems to a second set of P ISDN line customer premise equipment modems, wherein at least some of the second set of P ISDN line customer premise equipment modems are members of the first set of M TCM-DSL customer premise equipment devices.

Warmwald (U.S. Patent No. 6,798,769 B1) also discloses a communication system in Figure 1 comprising a multiplexer or switch circuit 10 for communication

between a central office/DSLAM 12 and customer premise equipments 14 for switching the modems 24 of the central office/DSLAM 12 with different modems 22 of the customer premise equipments 14. Figures 7(a) to 7(c) shows three different connections between the modems of the central office/DSLAM 12 and the customer premise equipments 14 by the multiplexer 10.

Therefore, it would have been obvious to one of ordinary skill in the art to include a switching circuit in Long's apparatus coupled between the central office 8 and the customer premise equipments as taught by Warmwald that the modems of the central office are capable of selecting different transmission lines for communication with the modems of the customer premise equipments in order to perform different transmission data rate.

With respect to claims 5 and 10, it is well known in the art that data request signals are required between the transmission of the modems of the central office and the customer premise equipments.

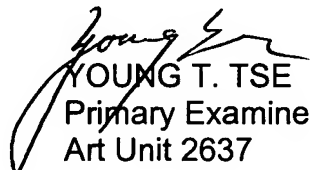
With respect to claims 16 and 17, clearly the upstream data link is one of a POTS optical fiber, a twisted pair conductor, or DSL link.

With respect to claim 18, the total number of modems (5) in the central office is the same as the total number of the customer premise equipment modems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday and Wednesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YOUNG T. TSE  
Primary Examiner  
Art Unit 2637